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APPLICATION FOR LETTERS PATENT

Applicants: LUNG-PO TSAI

Title : ELECTRICAL AIR BLOWER

5 Claims

3 Sheets of Drawings

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# **ELECTRICAL AIR BLOWER**

## **BACKGROUND OF THE INVENTION**

### **1. Field of the Invention**

The present invention relates to an electrical air blower, and more particularly to an electrical air blower for pumping up an inflatable toy or doll.

### **2. Description of Related Art**

Inflatable toys or dolls are generally pumped up by an inflator or a pump. The inflated toys should be detached from the inflator or pump and are used individually. However, air will gradually leak out from the inflated toys and thus they shrink, thereby needing to be pumped up again. Thus, the prior art inflators are very inconvenient for a user.

Therefore, the invention provides an electric air blower to mitigate or obviate the aforementioned problems.

## **SUMMARY OF THE INVENTION**

The main objective of the present invention is to provide an electrical air blower which can continuously blow air into an inflatable toy.

Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is a perspective view of an electric air blower in accordance with the invention;

Fig. 2 is an exploded perspective view of the electric air blower of Fig. 1; and

1            Fig. 3 is an operationally schematic view of the electric air blower used  
2 with an inflatable toy.

### 3    DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

4            With reference to Figs. 1-2, an electric air blower (10) in accordance  
5 with the present invention has a cylindrical housing being composed of a first  
6 semi-housing (20) and a second semi-housing (30) attached to the first  
7 semi-housing (20) by fasteners (not numbered). The first semi-housing (20) and  
8 the second semi-housing (30) are symmetrical to each other.

9            The first semi-housing (20) has multiple first feet (21) formed at a lower  
10 side thereof and multiple first notches (22) respectively defined between the first  
11 feet (21). The second semi-housing (30) has multiple second feet (31) formed at  
12 a lower side thereof and multiple second notches (32).

13           With reference to Figs. 1-3, the first semi-housing (20) has multiple first  
14 air inlets (23) defined at a bottom plate (not numbered) thereof, and the second  
15 semi-housing (30) has multiple second air inlets (33) defined at a bottom plate  
16 (not numbered) thereof.

17           A first middle plate (24) is formed at a middle portion of the first  
18 semi-housing (20), and a first upper plate (25) is formed at an upper portion of  
19 the first semi-housing (20). A second middle plate (34) is formed at a middle  
20 portion of the second semi-housing (30), and a second upper plate (35) is formed  
21 at an upper portion of the second semi-housing (30).

22           A first bulb cap (26) is formed at a top surface of the first semi-housing  
23 (20), and a second bulb cap (36) is defined at a top surface of the second  
24 semi-housing (30) and matches the first bulb cap (26) to form a bulb chamber

1 (not numbered) for installing a bulb (70) therein. The first bulb cap (26) has  
2 multiple first elongated slots (27) defined therethrough, and the second bulb cap  
3 (36) has multiple second elongated slots (37) defined therethrough.

4 A first semi-groove (28) is transversally defined at an outer periphery of  
5 the first semi-housing (20), and a second semi-groove (38) is defined at an outer  
6 periphery of the second semi-housing (30) and matches the first semi-groove  
7 (28). Multiple first air outlets (29) are defined through the top surface of the first  
8 semi-housing (20), and multiple second air outlets (39) are defined through the  
9 top surface of the second semi-housing (30).

10 An air impeller (40) is mounted between the bottom plates of the  
11 semi-housings (20, 30) and the middle plates (24, 34). A motor (50) is mounted  
12 between the upper plates (25, 35) and the middle plates (24, 34), and has an  
13 output axle (51) extending downwards to drive the air impeller (40).

14 A circuit board (60) is installed in the first semi-housing (20) and  
15 electrically connected with the motor (50). The bulb (70) is installed in the bulb  
16 chambers being composed of the first bulb cap (26) and the second bulb cap (36).  
17 When the bulb (70) is turned on, light can pass through the elongated slots (29,  
18 39).

19 In use, an inflatable toy (80) with an opening (81) at a bottom thereof is  
20 provided outside the air blower (10). The bottom of the inflatable toy (80) is  
21 fastened by a cord (not shown) in the grooves (28, 38). Then, when the air  
22 blower (10) is actuated, the air impeller (40) is driven by the motor (50) to rotate,  
23 and air flows through the air inlets (23, 33) into the air blower (10) and is blown  
24 out through the air outlets (29, 39) to inflate the inflatable toy (80). Thus, the

1 inflatable toy (80) can be continuously inflated to float in air as long as the  
2 electric air blower (10) is actuated, and can be used as an advertising mark to  
3 attract passers-by.

4           Moreover, the bulb (70) can be turned on to use the inflatable toy (80) at  
5 night.

6           It is to be understood, however, that even though numerous  
7 characteristics and advantages of the present invention have been set forth in the  
8 foregoing description, together with details of the structure and function of the  
9 invention, the disclosure is illustrative only, and changes may be made in detail,  
10 especially in matters of shape, size, and arrangement of parts within the  
11 principles of the invention to the full extent indicated by the broad general  
12 meaning of the terms in which the appended claims are expressed.